



**Joint Statement from the Society of British  
Neurological Surgeons (SBNS)  
and the Royal College of Anaesthetists (RCOA)  
Regarding the Provision of Emergency Paediatric  
Neurosurgical Services**



Endorsed by the: Association of Anaesthetists [AAGBI]; Association of Paediatric Anaesthetists [APA]; Intensive Care Society (ICS); Neuroanaesthesia Society [NASGBI]; Paediatric Intensive care Society [PICS]

### **Background**

In March 2009 Professor Sir Bruce Keogh (NHS Medical Director) asked the National Specialised Commissioning Group (NSCG) to review the delivery of paediatric neurosurgical services in England and develop robust proposals that would secure safe and sustainable world class services for children and their families. Included in this work was the request to develop Service Standards (1).

The review process has highlighted concerns about the neurosurgical management of some children requiring emergency surgery under the present system.

There are three main concerns:

1. Some surgeons and anaesthetists at neurosurgical centres that provide routine services to adults only, have indicated that they do not feel confident to care for a child with a life-threatening condition; the end result could be that some children in this situation will be refused emergency surgery at such centres
2. The ability of non-specialist hospital teams to take responsibility for resuscitating and stabilising children with life-threatening neurosurgical conditions
3. The perceived competence of staff at non-specialist hospitals to be responsible for transferring children with life-threatening neurosurgical conditions to tertiary paediatric neurosurgical services

Whilst the need for un-scheduled admission of children to neurosurgery is relatively frequent, the need for immediate life-saving neurosurgery is rare. Children requiring immediate life-saving care may present to hospitals without neurosurgical services however and require urgent stabilisation and transfer to a neurosurgical centre. Such children may also present to Emergency Departments (ED) in hospitals with an 'adult only' neurosurgical service. Both situations necessitate emergency management of children by clinicians who may not treat children requiring neurosurgical care on a regular basis. Clinicians called upon to provide this very occasional life-saving surgery or emergency transfer of a sick child, should be fully supported by their senior hospital management, paediatric neurosurgical centre and professional associations. This links to the SBNS policy statement (2) on the need to provide emergency life-saving neurosurgery without delay or consideration of resource constraints.

Most children with life-threatening neurosurgical conditions will come to more harm from the delay related to the time waiting for a paediatric intensive care (PIC) retrieval team to travel to the referring hospital (3) than from the relative risks of a direct transfer by the non-specialist hospital transfer team, or from emergency neurosurgical care by the adult neurosurgical team prior to transfer for definitive care. There is therefore a need for networked, protocol-delivered, solutions with clear instructions for referral and management from lead paediatric neurosurgical centres to non-specialist hospitals as well as to hospitals providing 'adult only' neurosurgery. There is support in a number of recent publications for stabilisation and early transfer of such cases by non-PIC teams from the referring hospital for definitive emergency surgery, or for early emergency surgery by non-paediatric neurosurgical teams in life-threatening situations, prior to transfer for further definitive care (4, 5,6,7).

After consideration of the issues highlighted, the SBNS and RCoA have developed the following agreed guidelines for the care of such children:

- 1. Hospitals accepting acute paediatric admissions should be co-located with Emergency Departments, Anaesthesia and ICU services and should have on-site CT scanners. It should also be possible to perform a CT scan on a child within one hour of admission. Ambulance services should be briefed on which hospitals are suitable for such emergency paediatric admissions.**
- 2. All children with urgent or emergency neurosurgical conditions should be discussed with the closest service providing paediatric neurosurgical care except those children admitted to hospitals with on-site "adult" neurosurgical services. In these cases, discussion should initially be with the resident team.**
- 3. In a true emergency situation involving a child requiring urgent neurosurgery for a deteriorating condition admitted to an 'adult-only' neurosurgical service, the most appropriate surgeon, anaesthetist and intensivist available would be expected to provide life-saving care including emergency resuscitation and surgery. This should be undertaken following full consultation with clinicians at the paediatric neurosurgical centre and be supported by senior hospital management. This action would be fully supported by both the RCoA and SBNS.**
- 4. Transfers of children for emergency neurosurgery should normally be undertaken by the referring hospital. Children deteriorating from acute neurosurgical conditions will be transferred directly by the referring hospital following primary resuscitation / CT scanning in consultation with the lead centre consultant paediatric neurosurgeon and PIC on call consultant. This transfer should be undertaken by the most appropriate and senior team possible. Very rarely, the use of retrieval teams may be appropriate (very early referral, short distances, complex associated injuries); such a decision will only be made by the Paediatric Neurosurgeon in consultation with local clinicians and the PIC/Retrieval Consultant. In patients with no indication for immediate neurosurgery, the balance of risks between retrieval and local team transfer should be agreed between the paediatric neurosurgical the PIC/Retrieval teams and local clinicians.**
- 5. Referring Hospitals should have policies and protocols in place for such situations. These should detail the personnel who should be called upon to secure the airway, stabilise and transfer the child, together with the necessary equipment (2). Ambulance services should be informed in advance of the need for systems to expedite these transfers promptly.**

#### References:

1. Safe and Sustainable: Paediatric Neurosurgical Services. Draft Service Standards. NSCG. 2009. [http://www.ncg.nhs.uk/index.php/safe-and-sustainable-programmes/#neurosurgery\\_services\\_programme](http://www.ncg.nhs.uk/index.php/safe-and-sustainable-programmes/#neurosurgery_services_programme)
2. <http://www.sbns.org.uk/site/1096/default.aspx>
3. <http://www.thisislondon.co.uk/standard/article-23774646-brain-tumour-boy-dies-after-being-shunted-between-three-hospitals.do>
4. The acutely or critically sick or injured child in the district general hospital: A team response. DH, RCPCH, RCoA, RCN, RCS, APA and BAPS. Oct 2006. Tanner S [http://www.dh.gov.uk/en/Consultations/Closedconsultations/DH\\_4124412](http://www.dh.gov.uk/en/Consultations/Closedconsultations/DH_4124412)
5. General Medical Council. Good Medical Practice; the duties of a doctor 2009 [http://www.gmc-uk.org/guidance/good\\_medical\\_practice/duties\\_of\\_a\\_doctor.asp](http://www.gmc-uk.org/guidance/good_medical_practice/duties_of_a_doctor.asp)
6. Guidance on the provision of Paediatric Anaesthetic Services. Royal College of Anaesthesia. 2009 <http://www.rcoa.ac.uk/docs/GPAS-Paeds.pdf>
7. Safe Paediatric Neurosurgery 2001. Society of British Neurological Surgeons <http://www.sehd.scot.nhs.uk/NationalFramework/Documents/neuro/key%20docs/BookletSafePaediatricSurgery2001.pdf>